

- a transmitter operable to transmit the VSB modulated signal;
said reception apparatus comprising:

- a demodulator operable to demodulate the VSB modulated signal to a demodulated signal;

- a de-interleaver operable to de-interleave the demodulated signal to produce a de-interleaved data stream; and

- a trellis decoder operable to trellis decode the de-interleaved data stream to the data stream.

20. A signal transmission apparatus comprising:

- a trellis encoder operable to trellis encode a data stream to produce a trellis encoded data stream;

- an interleaver operable to interleave the trellis encoded data stream to produce an interleaved data stream;

- a modulator operable to modulate the interleaved data stream to produce a VSB modulated signal; and

- a transmitter operable to transmit the VSB modulated signal.

21. A signal receiving apparatus comprising:

- a receiver operable to receive a transmitted VSB modulated signal having information of a data stream;

- a demodulator operable to demodulate the transmitted VSB modulated signal to a demodulated signal;

- a de-interleaver operable to de-interleave the demodulated signal to produce a de-interleaved data stream; and

- a trellis decoder operable to trellis decode the de-interleaved data stream to the data stream.

22. A signal receiving apparatus according to claim 21,
wherein said signal receiving apparatus comprises a video decoder operable to decode the
data stream to a video signal.

23. A signal receiving apparatus according to claim 22,
wherein said signal receiving apparatus comprises an output operable to output the video
signal.

24. A signal receiving apparatus according to claim 22,
wherein said signal receiving apparatus comprises a display operable to display the video
signal.

25. A signal transmission and receiving method comprising a transmission method and a receiving
method,

said transmission method comprising:

- trellis encoding a data stream to produce a trellis encoded data stream;
- interleaving the trellis encoded data stream to produce an interleaved data stream;
- modulating the interleaved data stream to produce a VSB modulated signal; and
- transmitting the VSB modulated signal;

said reception method comprising:

- demodulating the VSB modulated signal to a demodulated signal;
- de-interleaving the demodulated signal to produce a de-interleaved data stream; and
- trellis decoding the de-interleaved data stream to the data stream.

26. A signal transmission method comprising:
- trellis encoding a data stream to produce a trellis encoded data stream;
- interleaving the trellis encoded data stream to produce an interleaved data stream;

- modulating the interleaved data stream to produce a VSB modulated signal; and
- transmitting the VSB modulated signal.

27. A signal receiving method comprising:

- receiving a transmitted VSB modulated signal having information of a data stream;
- demodulating the transmitted VSB modulated signal to a demodulated signal;
- de-interleaving the demodulated signal to produce a de-interleaved data stream; and
- trellis decoding the de-interleaved data stream to the data stream.

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